

Jackson Demonstration State Forest
Water Gulch 2013 Timber Sale
SUMMARY OF SALE INFORMATION

Bid Date:	March 26, 2013	Estimated Net Volume:	5,109 MBF*
Minimum Bid:		THP Number:	1-12-036 MEN
Redwood	\$0 /Mbf	Information:	Erik Wahl
Fixed Price:		Phone:	(707) 964-5674
Douglas-fir	\$20 /Mbf	Date:	3/6/2013
Whitewoods	\$20 /Mbf		

Table 1. Estimated Total Volume to be Harvested (Bf)

Species	Gross	Net	% Defect & Breakage	% Comp.
Redwood	2,377,329	2,068,280	13%	40%
Douglas-fir	3,100,007	2,697,010	13%	53%
Whitewoods	387,044	344,470	11%	7%
Totals	5,864,380	5,109,760		100%

* Volume includes 60,000 BF Redwood and 10,000 BF Douglas-fir to be delivered to Parlin Fork Conservation Camp

Table 2a. Estimated Volume, Cable (Bf) 76%

Species	Group Selection		Single Tree Selection		Totals
	Gross	Net	Gross	Net	Net
Redwood	1,151,785	1,002,050	706,973	615,070	1,617,120
Douglas-fir	1,906,186	1,658,380	374,498	325,810	1,984,190
Whitewoods	218,654	194,600	72,836	64,820	259,420
Totals	3,276,625	2,855,030	1,154,307	1,005,700	3,860,730

Table 2b. Estimated Volume, Tractor and ROW (Bf) 24%

Species	Group Selection		Single Tree Selection		Totals
	Gross	Net	Gross	Net	Net
Redwood	424,174	369,030	94,397	82,130	451,160
Douglas-fir	748,598	651,280	70,725	61,530	712,810
Whitewoods	81,141	72,220	14,413	12,830	85,050
Totals	1,253,913	1,092,530	179,535	156,490	1,249,020

Table 3. Estimated Acreage

	Plan acres	NSO Buffer	Net acres
Cable	570	0	570
Tractor	80	0	80
Right-of-Way	24		24
WLPZ	160		160
Totals	834	0	834

Table 4. Harvest QMD by Species (not including estimated cable corridor volume)

Species	Group Selection	Single Tree Selection
Redwood	20.1	20.2
Douglas-fir	18.0	21.0
Whitewoods	17.5	16.8

GENERAL INFORMATION

The list below is not intended to be all inclusive and all requirements of the Water Gulch Timber Harvest Plan (1-12-036 MEN) apply. Copies of Sections I and II of the THP are available by request from the State Forest headquarters or available via the internet, [ftp://thp.fire.ca.gov/THPLibrary/North Coast Region/THPs2012/1-12-036MEN/](ftp://thp.fire.ca.gov/THPLibrary/North_Coast_Region/THPs2012/1-12-036MEN/) Water Gulch THP (1-12-036MEN). One complete copy will be provided to the LTO.

TIMBER HARVESTING PLAN

Item 14d: SELECTION – HARVEST TREE DESIGNATION

Harvest trees shall be marked with blue paint using a horizontal stripe at breast height and a stump mark below the cut line.

GROUP SELECTION – HARVEST TREE DESIGNATION

Group boundaries are identified with red/black striped flagging. For groups where herbicide treatments are proposed, all unmarked conifers shall be harvested and all unmarked hardwoods shall remain standing, with the exception of trees felled for safety and cable corridors. For groups where mechanical treatments are proposed, all unmarked conifers and hardwoods shall be felled.

RETENTION TREES - All areas within THP

Individual trees may be marked for retention by the RPF or supervised designee with blue or orange paint with a circle at breast height and at the base of the tree. No harvesting of downed trees or old logs from previous operations is proposed. See Item 14(g) below. Trees that are unmarked or identified for retention may be felled in the following situations:

- 1) To provide safe operating corridors for skyline cable operations.
- 2) To provide stumps for cable-rigging purposes.
- 3) Compliance with Title 8 CCR, Logging and Sawmill Safety Orders.
- 4) As described in Item 14(g) below.
- 5) Road Right-of-way, see below.

RETENTION TREES in Class III ELZs within GROUP BOUNDARY

- Trees in the ELZ and channel zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the channel zone shall be marked for retention by the RPF or supervised designee. [ref 14 CCR 916.9(h)].
- Sufficient trees to meet the stocking requirements of 14 CCR 912.7
- Hardwoods marked for retention shall not be treated with herbicide or felled, except for situations (1-4) discussed above.

Item 14f: Marking and felling of hardwood trees shall conform to the marking guidelines of Item 14(d) above.

SELECTION

Tanoak will be felled and may be harvested to reduce the competition with conifers. Madrone and chinquapin are not proposed for harvest except as necessary to facilitate yarding operations and for safety.

GROUP SELECTION

All Group B species shall be managed to maintain relative site occupancy of A species.

Herbicide and/or mechanical treatments will be utilized for managing Group B species. Where mechanical treatments are implemented, follow up measures will include manual cutting and/or herbicide applications. Follow up measures are not proposed where “hack and squirt” herbicide applications will be used. The LTO and/or Timberland Owner shall be responsible for the application of herbicides and follow-up measures.

Item 14g: CABLE CORRIDORS: Outside of the WLPZ, to the extent feasible cable yarding corridors shall be limited to 10 feet in total width, with the understanding that some corridors may be wider as a result of silviculture prescription or harvesting trees that have been substantially damaged by timber operations. Cable corridors shall be pre-planned and pre-located by the LTO.

CABLE CLEARANCE TREES: Any tree (within the THP area only) may be harvested/felled if necessary for cable clearance, except for trees located within a WPLZ. Trees located within a WLPZ shall not be felled for cable corridors unless they directly impact the safety of cable-yarding operations; trees felled for safety may be harvested.

TREES SUBSTANTIALLY DAMAGED BY LOGGING OPERATIONS: Damaged trees may not be felled if marked for retention or if the damaged tree has a cavity potentially used by wildlife. Otherwise, merchantable young growth trees damaged during timber operations shall be felled as approved and directed by the Plan Submitter.

DOWNED TREES: There shall be no cutting or removal of existing unmarked down trees or logs. These logs may be moved if necessary for clearing truck road rights-of-way and as otherwise necessary to harvest the designated timber. If windthrow of merchantable trees occurs in the logging area prior to completion of operations, windthrown trees outside of the WLPZ may be harvested upon approval of the Plan Submitter.

Item 16: With prior approval of the Plan Submitter's designee, the LTO may cable yard any area designated for ground based yarding provided it will afford equal or greater protection to the soil and residual stand.

Item 18: Soil stabilization treatments required under item 18 will be accomplished using weed free straw. If grass seed is used, it will be a native grass seed or benign non-native grass species.

In the THP the coverage rate states at least 90% of the surface to a depth of at least three inches. However, the requirement stated in the Timber Sale Contract shall be met: 95% surface coverage to a depth of at least four inches.

WLPZ roads and areas within the WLPZ where operations expose mineral soil equal to or greater than 100 sq. ft. shall be treated as described in Item # 18 and where otherwise stated.

For areas disturbed from May 1 to October 15, treatment to stabilize soils to be completed prior to:

- Start of any rain that causes overland flow across or along the disturbed surface that could deliver sediment into a watercourse in quantities deleterious to the beneficial uses of water.
- Any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.

All waterbreaks shall be installed no later than the beginning of the winter period of the current year of timber operations.

Installation of drainage facilities and structures is required from October 15 to November 15 and from April 1 to May 1 on all constructed skid trails and tractor roads prior to sunset if the National Weather Service forecast is a "chance" (30% or more) of rain within the next 24 hours.

Traveled surfaces of logging roads shall be treated for dust abatement and kept in firm condition.

Item 20: Ground based equipment shall not be used in cable areas except for long lining from areas

designated for ground based equipment.

To assist cable yarding operations, ground based equipment (including cable yarding equipment) may be used to yard logs within the cable yarding area where existing skid trails are shown on the Timber Harvest Map. Yarding equipment shall be confined to the existing skid trail and on adjacent slopes < 50% (outside any ELZ, EEZ or WLPZ). Skid trails have been pre-flagged by the RPF with yellow (Site-Mark® "SKID TRAIL") flagging.

Item 23: Year-round wet weather restrictions apply and shall be adhered to.

Item 25: New road construction and road abandonment is proposed.

Item 26: The distance for Class I WLPZs is 150 feet on all slopes, for Class II WLPZs is 100 feet on all slopes, between 50-75 feet for springs and 50 feet for wet areas. All WLPZ's are identified with blue and white stripe "WLPZ" flagging. With the exception of WLPZ width, all protection measures applicable to Class II's apply to springs and wet areas.

There is a water drafting plan and a 1603 permit. Water drafting sites approved for use include WD sites 3, 7 & 8. See appurtenant roads map.

Item 32: No timber operations shall occur until Northern Spotted Owl (NSO) protocol surveys have been completed for the current, and/or immediately preceding survey period, the results have been provided to CAL FIRE to be evaluated for consistency with the plan and the protocol, and the results have been amended into the plan.

Item 33: The California Logging and Sawmill Safety Orders, Title 8 CCR 6259(a), require that "all ... snags which appear to be dangerous to any operation shall be felled."

All snags within the timber harvest area shall be retained with the exception of snags that pose a fire or safety hazard. If the LTO determines a snag to be a hazard, the LTO has the option to fall the snag for safety purposes.

TIMBER SALE AGREEMENT

Page Item Description

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| 3 | 2D | All timber scaled by "third party" scaling organization, using Revised Scribner Decimal C Log Rule. |
| 3 | 3A | All merchantable timber designated for harvest shall be cut and paid for and felled and all timber operations complete (with exception of road side lopping and felling hardwoods in mechanical treatment group units described in Item 14) in the NORTH harvest unit, by November 15, 2013.

Logging operations shall occur in the order of the 1) North Unit, 2) West Unit and lastly the 3) South Unit, unless otherwise approved by the State. Operations in the Single Tree Selection Unit or other areas designated for single tree selection silviculture and road construction may occur simultaneously with any other unit described above.

All merchantable timber designated for cutting shall be paid for and felled, and all other timber operations shall be completed by November 15, 2014. |
| 3 | 3B | Notification and permission is required for operations on weekends or State holidays |
| 4 | 3C | The Purchaser shall notify the State, two weeks prior to conducting operations within the Range Notification Zone. |
| 5 | 7 | Production and cost data with respect to all timber harvesting operations and other forestry activities. Required data includes person-hours and equipment-hours spent on each activity, and applicable rates for employees, machines and supervision, and costs for any materials or services needed for completion of activities.

Daily water use data with respect to water drafting activities shall be provided. |
| 6 | 10 | The minimum log dimensions for utilization is 10 feet in length and 8 inches in small-end diameter.

Any log segment presented for scaling shall be scaled as merchantable which has a net volume of at least 10 board feet, providing a net merchantable scale of at least 25 percent of the total volume. |
| 7 | 11B | Payment for scaling and reporting services performed by the scaling organization shall be made by the Purchaser. |
| 8 | 11J | Conduct a minimum of one check scale per month per scaler by the scaling organization, during the operating season, to document scaler proficiency. |
| 9 | 11P | Weekly reports of faller days and volume by unit. This information to be available for collection by the Timber Sale Officer or delivered to State Forest HQ no later than the following Tuesday. |
| 10 | 13A | All terms, provisions and requirements of the Forest Practice Rules and the Timber Harvesting Plan (1-12-036 MEN) are made part of the Timber Sale Agreement. |

On completion of operations satisfactory to the Timber Sale Officer, the operator shall certify by

<u>Page</u>	<u>Item</u>	<u>Description</u>
		letter to the STATE, all operations are complete and comply with Forest Practice Rules and THP.
10	13A1	<p>A pre-work conference to be attended by representatives of the State and the Purchaser, including subcontractors is required before operations can begin.</p> <p>The Purchaser is responsible to ensure all contractors are provided with relevant applicable documentation.</p>
11	13A2	No timber operations shall be conducted after February 1 of any year until the State or the Purchaser has completed required surveys for northern spotted owls, and extension of the No-Take determination has been received from the appropriate reviewing agency.
11	13A3	Flagging of all skid trails required at least two weeks in advance and notify the Timber Sale Officer for approval.
11	13A5	<p>Minimum distance between new skid trails is 100 feet, unless waived by the Sale Officer.</p> <p>Erosion control requirements apply year-round. Erosion control structures shall be installed on all skid trails and temporary or seasonal truck roads within 30 days of completion of their use, or at the end of day if the U.S. Weather Service forecast is a "chance" (30% probability or more) of rain before next working day or at any time that the equipment needed to install such structures leaves the sale area. All wet weather and winter period operations of the THP apply. Timber operations may be suspended by the sale officer if damage is occurring.</p>
12	13A7	Merchantable trees felled and bucked to log lengths, limbed to the 8-inch top, and the top bucked at the time of felling.
12	13A8	All slash created by timber operations within 100 feet of JDSF Road 310, shall be lopped to the extent that no portion shall remain over 12 inches above the ground for the first 50 feet and 24 inches for the remaining 50 feet. For all other seasonal roads, lop slash 24 inches from the ground within 50 feet.
12	13A9	<p>Maximize the extent of spreading slash to avoid or minimize the need for piling and isolating slash for burning.</p> <p>Logging wastes on landings on permanent and seasonal roads shall be segregated into large materials which can be utilized by firewood cutters. Material at least 8 inches in diameter and 6 feet in length is considered suitable for firewood.</p>
12	13A11	Cable yarding system requirements are given.
12	13A12	Location of cable corridors will be flagged, mapped and approved by Sale Officer prior to rigging. Distance between cable corridors, no less than 200 feet measured from the back of cable road.
13	13A16	No permanent painted messages. Use temporary signs to be removed once their function is complete.
14	13A20	Mulching standard is at least 95% coverage to a minimum depth of four inches.
14	13A23	Minimize impacts to trees within the Sudden Oak Death (SOD) study area. Note: There is no recorded occurrence of SOD on Jackson Demonstration State Forest.

<u>Page</u>	<u>Item</u>	<u>Description</u>
15	14A	Black and red striped flagging combined with trees marked with yellow vertical striped paint, designate individual group unit boundaries. Specifications for felling and lopping of hardwoods within group selection unit boundaries designated for mechanical and herbicide treatment shall be adhered to.
16	14	Trees marked with orange painted circles, snags or other trees marked for retention as described in the Timber Harvest Plan or as designated by the Timber Sale Officer shall be retained, unless needed to be felled for cable corridors or safety.
17	17A3	Road width is 14 feet including 1 foot shoulder on each side of a 12 foot traveled surface. Width may be wider on curves.
17	17A5	Full bench road construction on slopes exceeding 50%.
17	17A6	Seasonal roads will be outsloped (2-5%) without a berm or ditch. Rolling dips will be constructed on road grades of 7% or less during road construction at locations proposed by the Purchaser, approved by the Timber Sale Officer. The Sale Officer will specify the location for drainage structures on roads greater than 7% prior to final road grading.
18	17D	All required culvert installations to be complete prior to log hauling on existing roads and concurrent with road construction and prior to use on proposed roads. Dispose culverts at an off-forest public disposal site.
20	17H	Maintenance work to be done within 15 days of end of hauling operation on each road and immediately on completion of hauling on any road after October 15.
20	17N	Install iron gate near the intersection of Road 310 and Road 311, concurrently with construction of Road 311 and to be complete within one week of Road 311 road construction completion.
20	17O	Provide, haul and place 85 yd ³ of 1-3" crushed rock and 10 yd ³ of 6-12" cobble and load, haul and place 275 yd ³ of coarse crushed rock provided by The Conservation Fund's rock quarry, onto Road 310 at locations specified by the Timber Sale Officer.
20	17Q	Perform road abandonment work along Roads 220, 220A and 220B. Work includes installing waterbars and pulling watercourse crossings. The Purchaser shall adhere to the Department of Fish & Game 1600 permit, associated with road abandonment work.
22	20	In addition to required fire tools complement, have available to the sale area for fire suppression purposes a "water wagon" or similar self-propelled vehicle of at least 1,000 gallon capacity.
35	1	A deposit of \$20,000 must be submitted with the bid.
36	3	Furnish STATE copies of Timber Yield Tax calculations and reporting forms.
40	4	Performance security of \$50,000 required prior to contract approval.

Applicable Class I/Class II watercourse crossings and water drafting for dust abatement shall be done according to the guidelines specified in the DFG 1600 permit, amended into the THP.

WATER GULCH THP FLAGGING CODE

/ = Striped • = Polka dot ■ = Checkered

DESIGNATED ACTIVITY	FLAGGING COLOR
Timber harvesting boundary*	pink-glo Site-Mark® "TIMBER HARVEST BOUNDARY" in black lettering
Class I watercourse (centerline)	solid blue
Class II watercourse (centerline)	blue/white stripe
Wet Area/Seep/Spring	blue/white stripe & white (combination)
Class II/Spring/Seep/Wet Area WLPZ	blue/white stripe SiteMark® "LAKE AND WATERCOURSE PROTECTION ZONE" in black lettering
Class I WLPZ	blue/white stripe SiteMark® "LAKE AND WATERCOURSE PROTECTION ZONE" in black lettering & solid blue (combination)
Class III watercourse (centerline)	blue?white polka-dot
Tractor/Cable boundary	red/white stripe
Tractor road (skid trail)	solid yellow
Message flag	pink/black stripe & yellow (combination)
Survey stations, Cruise stations	red?white polka-dot
Cable Road	solid red
Equipment Limitation Zone (ELZ) & Equipment Exclusion Zone (EEZ)	solid red & solid white (combination)
Property Line	solid red Site-Mark® "PROPERTY LINE" in black lettering
Group Opening Perimeter	black/red stripe
Silviculture Boundary	Pink/black stripe & white (combination)
Faller Stripe	solid white
Extent of Excavation	solid pink & solid white (combination)
SOD study plot boundary	solid purple
SOD study block boundary	orange ? white checkered